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KEWA

NEWSLETTER OF THE LONDON CHAPTER,
ONTARIO ARCHAEOLOGICAL SOCIETY
55 Centre Street, London, Ontario N6J 1T4

LONDON CHAPTER OAS

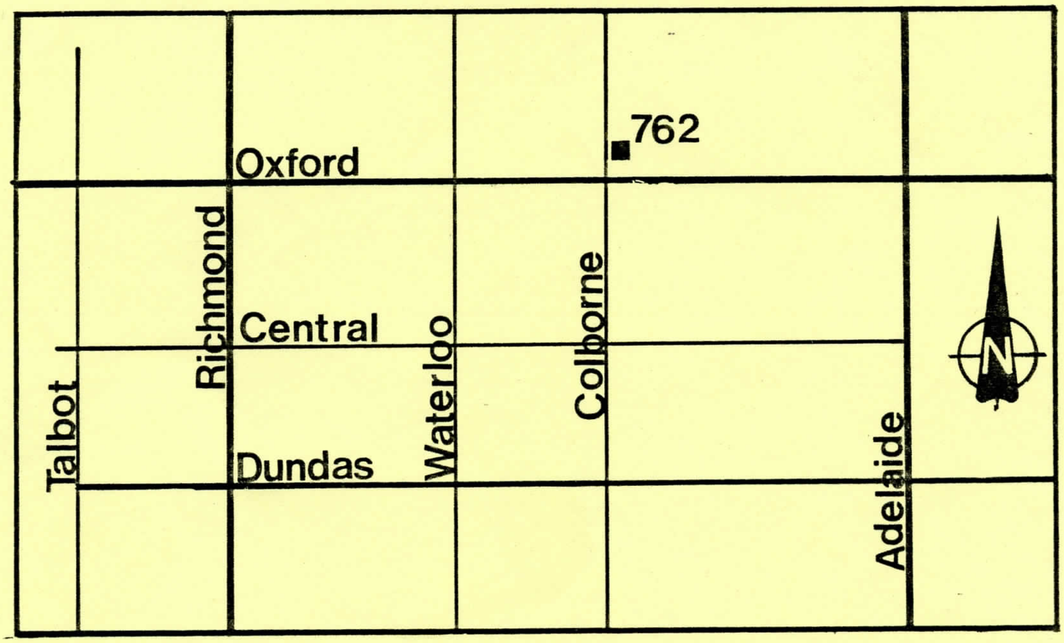
October, 1989

89-6

Saturday, December 9th is the date for our 1989 LONDON CHAPTER CHRISTMAS PARTY!!!!

This year our host will be new Chapter member Lorne Sheridan, who lives at 762 Colborne Street, just north of Oxford Street in London. The party will get under way by 7:30 PM, and as always the Chapter will provide the turkey. To find out what to bring, see ths month's Social Report. Remember, the Chapter will hold its annual business meeting at this event, so anyone with complaints, comments or ideas about the Chapter should present them at the meeting. Also, we will establish a slate of candidates for the 1990 Executive then, so the Christmas party is the last chance to submit a nomination.

P.S. Our Thursday, January 11th Speaker night will feature Morgan Baillargeon & Paul Lennox discussing their recent experiments of skinning deers and preparing hides using traditional tools and methods. See you at the Museum then!



Chapter Executive

ANNUAL RATES

Individual	$15.00
Family.	$18.00
Institutional . .	$21.00
Subscriber. . . .	$15.00

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Neal Ferris (432-2165)
34 Gerrard, London

Vice-President
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George Connoy (631-6338)
762 Elm Street, St. Thomas

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Pat Weatherhead, 412 Platts Lane, London

EXECUTIVE REPORT

With a great sigh of relief, the 1989 OAS Conference has come to a most successful conclusion. While numbers are only preliminary, it appears that over 200 people attended the two day event, and so far feedback has been all positive. In fact, it is nice to hear that many feel this OAS Conference was the best they had attended in years! Whether or not that is the case, the success of this Conference was entirely due to the session chairs, speakers and volunteers who pulled it all together. On behalf of the Chapter and everyone who attended that weekend, a big round of thanks is extended to all those who helped. In particular, Chapter Executive members Pat and Megan, as well as fill-in Treasurer Wayne Hagerty, were critical in making sure this conference was a success. Judging by their spaced-out expressions Sunday afternoon, Pat, Megan and Wayne went way beyond the "line of duty" and paid for it physically and mentally. Hope you relaxed the following weekend!

With the OAS Conference out of the way, the Chapter can now turn to more mundane things, such as getting **KEWA** out on time, etc. Another concern is the need to fill our Executive slate for 1990. Right now Meagan has indicated that she will run for President, while Pat will run for Vice-President and George will remain Treasurer. This leaves both Secretary and Director positions vacant and needing replacements, as well as possible competitors for the other positions. Members interested in running for the Executive should contact Wayne Hagerty (nominating co-ordinator) at 438-7130.

SOCIAL REPORT

LAB NIGHTS BEGIN AGAIN!!! Yes, just when it seemed that Lab Night was destined to go the way of the dodo and summer picnic, the Executive has been approached with a site collection to process. Dana Poulton recently mitigated a portion of the Historic Neutral Fradenburg site, and would like the material processed during Chapter Lab Nights. In light the fast approaching holiday season, however, Lab Nights will not begin until Wednesday, January 17th, then run through to May. As usual, more detailed analysis of Van Bemmel material will also be available for anyone interested in something other than washing artifacts. Hope to see you there!

Speaking of the holiday season, its time once again for our annual **Chapter Christmas Party**. This year the event will be held on Saturday, December 9th, starting at 7:30 PM. This year's venue is at the home of Lorne Sheridan, at 762 Colborne Street. Since Lorne lives in the heart of London, public transportation is available. For more information on how to get to Lorne's home, see the map on the cover of this month's issue of **KEWA**. Remember, the Chapter provides the Turkey and some of the fixings, but members are asked to bring the veggies, salads, desserts and condiments... not to mention beverages. To co-ordinate foods, please phone Chapter Director Pat Weatherhead at 438-4817 for further information.

EDITOR'S REPORT

This month a preliminary report by retiring Chapter President Neal Ferris on the London Chapter work at the Van Bemmel site in 1987 and 1988. The Van Bemmel site was the latest in a series of Chapter field projects, and managed to get a number of volunteers out from the Chatham area (who subsequently became Chapter members!). While preliminary, the results from this site indicate that another successful Chapter project was accomplished...So what's next??!!

A PRELIMINARY REPORT ON THE 1987-1988 LONDON CHAPTER EXCAVATIONS AT THE VAN BEMMEL SITE, KENT COUNTY, ONTARIO

Neal Ferris

Introduction

This brief report on the work conducted at the Van Bemmel (AcHm-31) site by members of the London Chapter of the Ontario Archaeological Society Inc., is based on a paper given at the May meeting of the Canadian Archaeological Association in Fredricton, New Brunswick. This paper was presented in a session entitled "On the Fringe in the Homeland: Non-Iroquoian Archaeology in Southern Ontario", and was intended to be one of two papers discussing cold weather Central Algonquian settlement-subsistence activities during the Late Woodland in this region. As such, the paper simply "highlighted" the findings from Van Bemmel, and only as it related to settlement-subsistence activities. This paper, therefore, will also be brief and summary in form. While a more formal report will be forthcoming, it was felt that a preliminary comment provided here would be useful, so that Chapter members could read about some of the positive archaeological results achieved during the 2 year project sponsored by the London Chapter. If readers are disappointed that more detail is not yet provided, you are encouraged to volunteer some time and assist myself and others in the on-going analysis of material from the site!

As an introduction to the Van Bemmel site, an early Younge phase Western Basin camp, it is necessary to provide a broader context by outlining some of the current perspectives (or at least one!) on the Late Woodland Tradition in southwestern Ontario that Van Bemmel is a part of. Much of the following is based on notions Carl Murphy and myself have put together for the soon-to-be finished Prehistory of Southern Ontario volume. As there still exists some debate regarding when this Chapter publication will be out, I won't bother citing the reference continually, beyond simply mentioning it here.

The Western Basin Late Woodland Tradition in Southwestern Ontario

The Late Woodland has certainly received the major focus of attention within southern Ontario archaeological research over the last few decades. Much of this work, however, has tended to center on Ontario Iroquois sites. The region of southwesternmost Ontario, bordered by the western end of Lake Erie and north to southern Lake Huron, was, unfortunately (or fortunately depending on one's perspective), beyond the extent of Ontario Iroquoian occupation. Consequently, Late Woodland peoples in this region were not only on the periphery of prehistoric Iroquoian territorial range, but their archaeology is also on the territorial periphery of research for most contemporary Ontario prehistorians. This isolation from the research "Canon" of Ontario archaeology has been reinforced by the fact that the few Late Woodland sites excavated in this area, prior to about 15 years ago, were either substandard, or the material recovered was simply interpreted as being western variants of contemporaneous Iroquoian groups to the east (eg. Tanner 1987; Wright 1966; see Wright 1987 for a reflection of changing perceptions).

Well, where scholarly-oriented archaeological research has failed to go, archaeological resource mitigation and salvage excavation has charged in (eg. Fox 1982; Kenyon 1988; Kenyon, Ferris and Hagerty 1988; Lennox 1982; Lennox, Murphy and Dodd 1989; Murphy 1987; 1988; Reid 1981; 1982; 1983). Since the start of the present decade, over a dozen Late Woodland sites in southwesternmost Ontario have been mitigated.

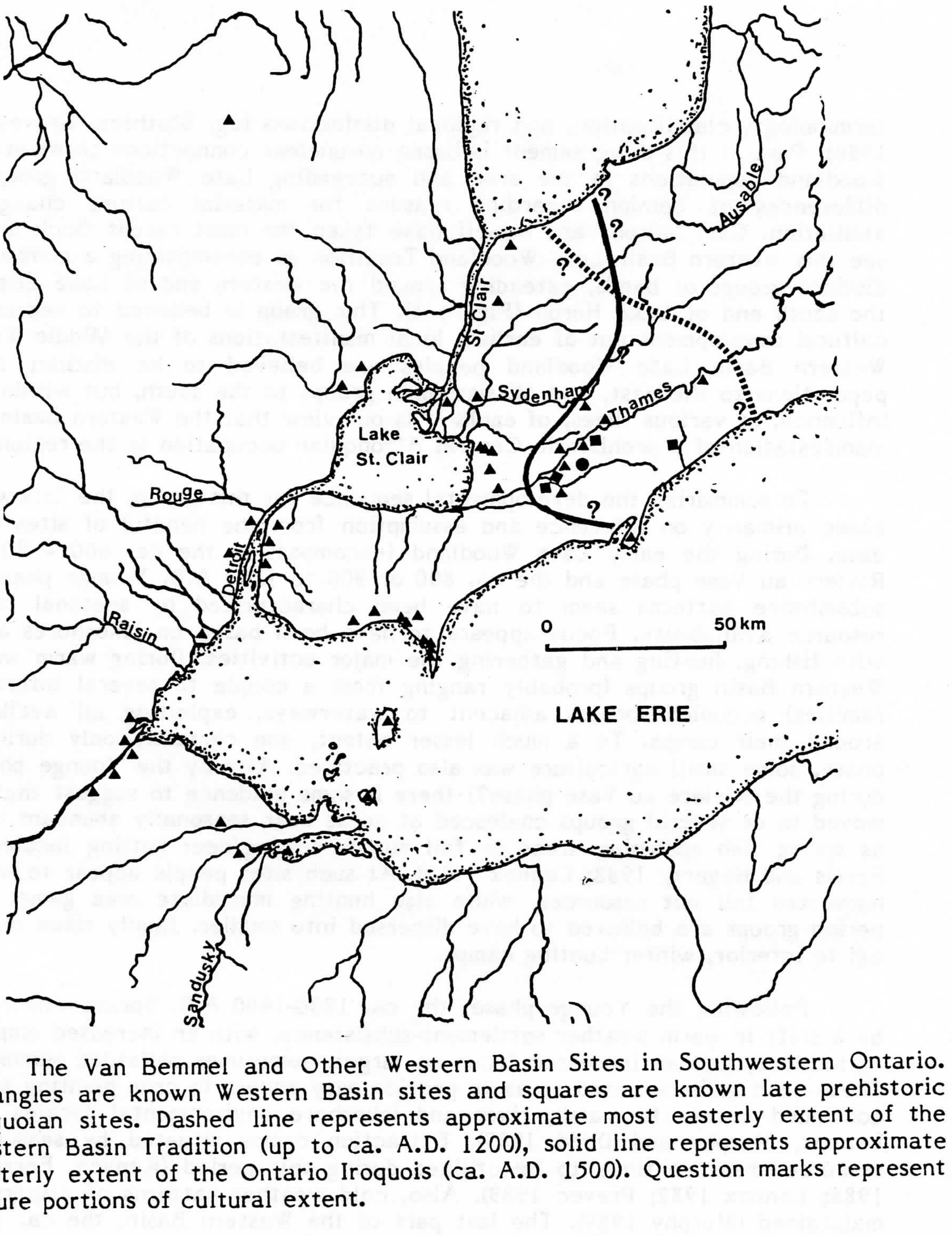

Figure 1: The Van Bemmel and Other Western Basin Sites in Southwestern Ontario. Triangles are known Western Basin sites and squares are known late prehistoric Iroquoian sites. Dashed line represents approximate most easterly extent of the Western Basin Tradition (up to ca. A.D. 1200), solid line represents approximate westerly extent of the Ontario Iroquois (ca. A.D. 1500). Question marks represent unsure portions of cultural extent.

While the "pristine-ness" of these sites have been somewhat compromised by their close association with development activities, the data gathered has nevertheless substantially advanced our understanding of this cultural occupation in the region.

The information we have now suggests that this Late Woodland group, rather than being associated with the Ontario Iroquois, was actually related to an archaeological culture located around the western end of Lake Erie, into southeastern Michigan and northwestern Ohio. Originally referred to as the Younge Tradition (Fitting 1965), since then this manifestation has been refined and re-defined, and is presently referred to as the Western Basin Tradition. Disagreement still exists between researchers over precise terminology, classification, and regional distinctions (eg. Stothers, Graves and Redmond 1984). Part of this disagreement is based on unclear connections between earlier Middle Woodland populations in the area and succeeding Late Woodland groups, as well as differences of opinion regarding reasons for material culture change and ethnic affiliation. Carl Murphy and myself have taken the most recent "kick at the can". We see this Western Basin Late Woodland Tradition as encompassing a number of regionally distinct groups or bands, extending around the western end of Lake Erie and north to the south end of Lake Huron (Figure 1). This group is believed to represent an in situ cultural development out of earlier, local manifestations of the Middle Woodland. These Western Basin Late Woodland peoples are believed to be distinct from Iroquoian populations to the east, and Mississippian groups to the south, but within the sphere of influence, at various times, of each. It is our view that the Western Basin Tradition is a manifestation of a prehistoric Central Algonquian occupation in the region.

To summarize the developmental sequence for this group, the following is offered, based primarily on inference and assumption from the handful of sites documented to date. During the early Late Woodland (encompassing the ca. 600 - 800 or 900 A.D. Riviere au Vase phase and the ca. 800 or 900 to 1200 A.D. Younge phase), settlement-subsistence patterns seem to have been characterized by seasonal mobility around resource availability. Focus appears to have been based on lakeshores and waterways, with fishing, hunting and gathering the major activities. During warm weather months, Western Basin groups (probably ranging from a couple to several informally extended families) occupied locales adjacent to waterways, exploiting all available resources around their camps. To a much lesser extent, and certainly only during the Younge phase, some small agriculture was also practiced. Also by the Younge phase (and likely during the Riviere au Vase phase?) there is some evidence to suggest that groups either moved to or several groups coalesced at areas near seasonally abundant resources, such as spring fish spawning areas or fall nut-harvesting/deer rutting locales (eg. Kenyon, Ferris and Hagerty 1988; Lennox 1982). At such sites people appear to have intensively harvested fall nut resources, while also hunting immediate area game. Following this period groups are believed to have dispersed into smaller, family sized units and headed off to interior, winter hunting camps.

Following the Younge phase, the ca. 1200-1400 A.D. Springwells phase is marked by a shift in warm weather settlement-subsistence, with an increased emphasis on maize agriculture, and an increased focus on larger, sometimes palisaded summer settlements. These tend to be situated so as to provide easy access to crop planting areas as well as continued access to marsh, river and lakeshore environmental locales (Kenyon 1988; Lennox, Murphy and Dodd 1989). Extraction camps situated by seasonally abundant resource areas continue to be utilized during this period (Kenyon, Ferris and Hagerty 1988; Lennox 1982; Prevec 1989). Also, cold weather patterns of dispersal were likely maintained (Murphy 1989). The last part of the Western Basin, the ca. 1400-1550 A.D. Wolf phase, is marked by even larger, warm weather villages, usually characterized by fortifications such as earthworks. In addition, specialized extraction camps, such as for fishing and hunting, continue to be used (Adams 1989; Kenyon 1988). Winter dispersal to smaller family units may have still occurred, although it is also possible that populations simply moved to winter villages.

The increasing tendency for settlements to be fortified during the last part of the Western Basin Tradition is likely a reflection of increasing hostility with Iroquoian groups to the east. This is marked by a retraction of territory occupied by Western Basin Tradition peoples, later followed by an Iroquoian expansion westwards (Figure 1). During the Younge phase the eastern extent of Western Basin occupations was situated in western Middlesex County. By the Springwells phase this shift had moved further to the west, and by the end of the Wolf phase, southwestern Ontario was largely abandoned. Historically recorded confrontations between Algonquian speaking groups, reported to live west of Lake Erie, and Historic Neutral Iroquois, are likely a continuation of this conflict (eg. Stothers 1981).

While recent work now allows us to discuss the general cultural history for the Western Basin Tradition, many gaps remain. The Younge and Springwells phases represent the best documented for the period, yet, until recently, small occupations had not been examined, and cold weather settlement-subsistence patterns were largely guessed at from speculation based on warm weather patterns and ethnological analogy. Fortunately, work at the Sherman site (Murphy 1989) and Van Bemmel are beginning to provide some information on this part of the settlement-subsistence pattern for the Western Basin Tradition.

The Van Bemmel (AcHm-31) Site and The London Chapter Field Project

The Van Bemmel site is a small, early Younge phase occupation located off of the Thames River, southeast of Chatham, along the north side of McGregor's Creek (Figure 1). The site area is small, approximately 40 by 15 meters, situated on a sandy-loam ridge overlooking a small creek flat (Figure 2). This creek flat has been extended in recent years due to a re-channelization of the creek by the Lower Thames River Conservation Authority in the early 1980's. Prior to that time the creek passed much closer to the ridge (dashed area in Figure 2). An Ontario Hydro powerline corridor passes over the site and a transmission tower was placed some 20-30 meters northwest of the main occupation area.

The site is located on Berrien loam and is near the south end of the sand and loam plain which characterizes much of Kent County. Not far south and west of McGregor's creek is the start of a major clay plain which extends across much of southwest Kent County and into the interior of the Essex County peninsula. Findlay (1978), based on original land survey records for the region, indicates that the general area of the site was characterized by a beech and maple forest, with the presence of some black walnut. Findlay also notes that along primarily the south side of McGregor's Creek, extending approximately 3 to 4 kilometers west of the Van Bemmel site location, there once existed a narrow strip of black ash swamp, one of several noted within a 5 kilometer radius of the site.

The Van Bemmel site location was first documented by London Chapter member John Sloan, who lives across from the site (Sloan 1987). John first noticed material on the surface of this small plot of land when it was first cultivated in 1983 by the present land owner, Mr. Bert Van Bemmel. John reported the site to the regional office of the Ministry of Culture and Communications and in the spring of 1986 Bill Fox and myself travelled to the site and examined the material John had already recovered. At that time features could be seen on the surface of the site, turned up by the plough. It was evident that Van Bemmel would soon become a plough-zone remnant, destroyed by continuing cultivation.

Subsequent controlled surface pick-ups and excavations at the site were initiated by the London Chapter of the Ontario Archaeological Society in order to provide field opportunities for Chapter members and other individuals interested in working on a site excavation. In exchange for an annual rental fee to access the property, Mr. Van Bemmel agreed not to cultivate the site during the two years the London Chapter worked there. John Sloan provided equipment needed to keep weeds down, as well as monitored the site for possible trespassers. John also provided volunteers with a picnic

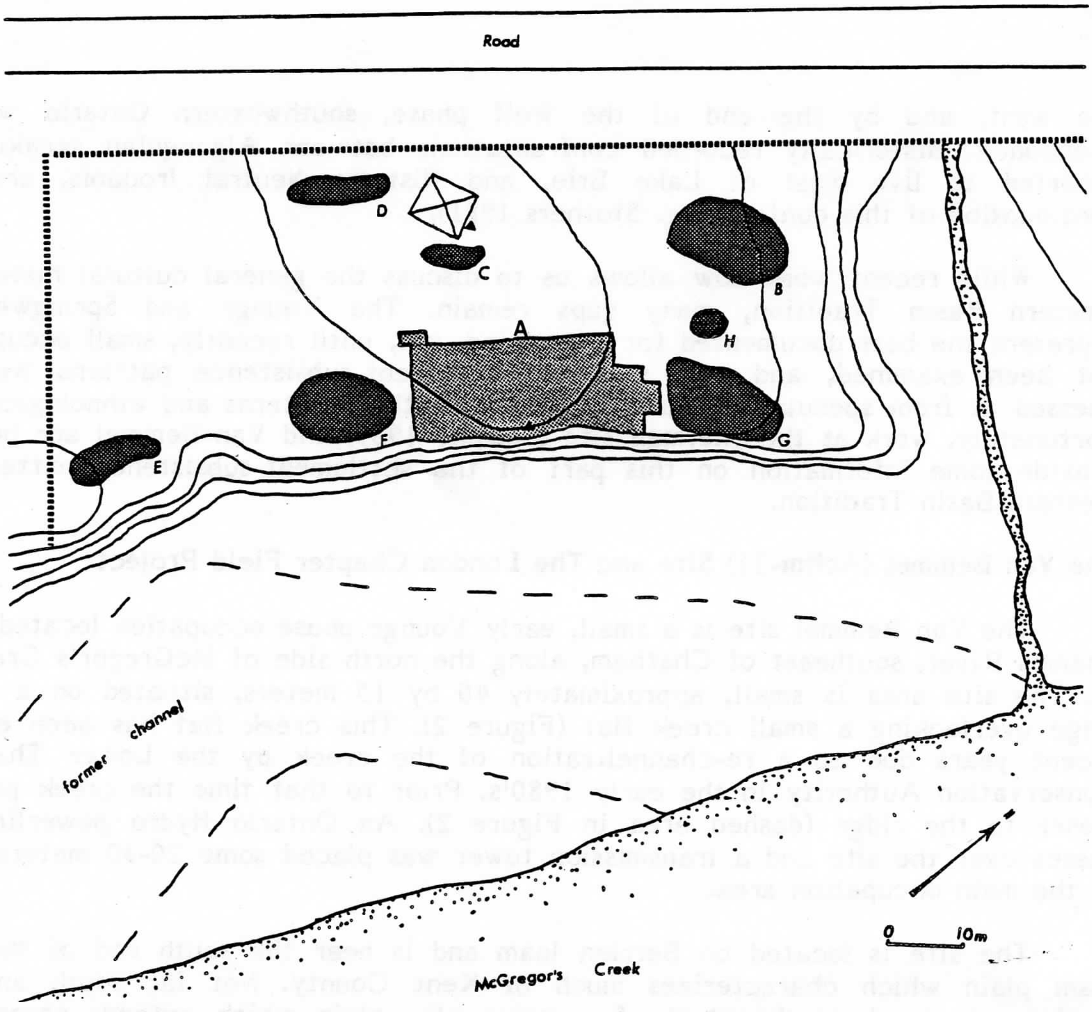

Figure 2: Van Bemmel Site Area of Excavation. Contour intervals are 50 cm. The small, approximately 1 acre of land rented by the London Chapter contained eight site areas. Area A is the main excavation of the Van Bemmel site. Area B is a possible Early Archaic encampment. Area C is unknown. Area D is early Riviere Au Vase Late Woodland. Area E is Couture Complex Middle Woodland. Area F is unknown (Terminal Archaic - late Prehistoric Iroquois?). Area G is unknown. Area H is unknown. Triangles represent site datums. The Hydro transmission tower is located between site Areas C and D.

table for quiet lunches in his backyard, as well as a kitten for the project director! The London office of the archaeology unit of the Ministry of Culture and Communications provided field equipment and facilities to process material recovered. Over the course of the excavation approximately 50 individuals volunteered their time on the site, ranging from experienced archaeologists to first-time novices. An additional number of people provided assistance during winter lab nights to process, catalogue and sort the material recovered from the site. In all, the project generated close to 20 new members or newsletter subscribers for the London Chapter, as well as momentarily satisfied a very deep thirst in the Chatham area for archaeological field opportunities.

Van Bemmel Excavations and Settlement Patterns

Work at the Van Bemmel site focused on a concentration of artifact debris and soil discolourations visible on the surface of the ridge as a result of cultivation (main excavation area in Figure 2). Excavations consisted of removing two meter square units and screening fill through 1/4" mesh. Due to the inexperience of some field workers, material left in the screen after sorting was not tossed, but rather bagged and taken back to London where this material was subsequently water screened. This proved to be a productive activity, with many smaller classes of artifact documented solely from findings in these screen remnants.

Excavations in the site area, as well as surface collections and subsequent test excavations made over the entire 1 acre parcel of land rented by the London Chapter revealed an incredible array of small scale occupations across the ridge. As a microcosm of southwestern Ontario archaeology, diagnostic materials recovered appear to represent distinct Early through Late Archaic, Early, Middle and even early Late Woodland occupations, as well as a possible late prehistoric Iroquoian component (Figure 3). These components were identified over the entire area of this parcel of land, and for the most part could be defined descretely into specific loci (Figure 2). Surface pick-ups and test excavations in several of these loci indicate that most were primarily short term encampments. For instance, a scattered 19th century occupation was documented, primarily in the area around the main concentration of Younge phase material. This period was represented by a lack of domestic debris, numerous musketballs, gunflints and percussion caps, pipes and liquor glass, and is likely the remains of an historic hunting camp. Based on the results of the Younge phase excavation, and the nature of the other prehistoric deposits, it would appear that this little one acre parcel of land was a favoured location by peoples probably wanting to do similar activities there for over the last 8000 years, give or take a century.

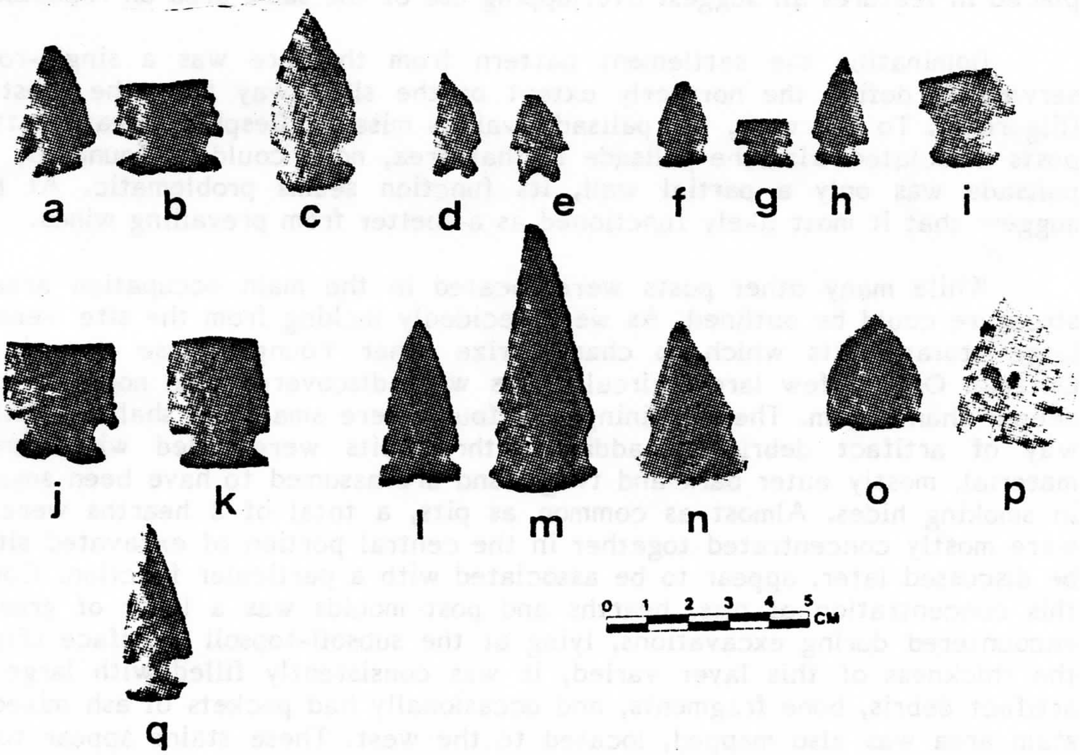

Figure 3: A Microcosm of Southwestern Ontario Projectile Points From Van Bemmel and Other Site Areas on the Ridge. a: Nettling; b: Kirk side-notched; c: untyped Early Archaic (?); d-e: Bifurcate base; f-h: Crawford Knoll; i: Innes; j: Hind; k: Meadowood (?); l-n: Meadowood (n is made of Flint Ridge); o-p: Jack's Reef; q: Nanticoke Notched.

While most of the smaller encampments appear to be single component, the main excavation area does appear to have been occupied several times in the past. A cache of Haldimand chert flakes found in a small area of the site may argue for an Early Archaic occupation there, as does a possible untyped Early Archaic point made on Haldimand Chert (C. Ellis pers. comm.; Figure 3.c). Several Crawford Knoll points and one Innis-like point were recovered from the site (Figure 3.f, g and i). Also, a "dropped" Saugeen pot, a possible Saugeen point, a couple of Middle Woodland-like bifaces and a portion of a slate gorget all likely represent an occupation from that period. Finally, the majority of the 19th century material also came from this area. While these components do limit the value of the site analysis, by far the vast majority of material from this area is associated with an early Younge phase occupation. Consequently, outside of limiting the value of lithic and F.C.R. analysis, these other components appear to have had little effect in confusing the Younge phase pattern observed from the site. This was fortunate, since the patterns uncovered were confusing enough (Figure 4). Excavations revealed a narrow clustering of post moulds, features, hearths, and smudge pits related to the Younge phase occupation, located immediately adjacent to the edge of the ridge. Bisecting most of the site is a deep, long trench, which apparently was opened around the time the field was first cultivated. This trench runs through the center of the site, overturning features and other settlement pattern. Also, further confusing the settlement pattern from the site is evidence indicating the site was occupied repeatedly during the Younge phase occupation, as several instances of features intersecting others, post moulds found underneath features, and post moulds placed in features all suggest overlapping use of the same area on repeated occasions.

Dominating the settlement pattern from the site was a single-rowed palisade, serving to define the northerly extent of the site away from the crest of the ridge (Figure 4). To the west, the palisade wall is missing. Despite repeated attempts to find posts associated with the palisade in that area, none could be found. If, therefore, the palisade was only a partial wall, its function seems problematic. At best, one can suggest that it most likely functioned as a shelter from prevailing winds.

While many other posts were located in the main occupation area, no possible structure could be outlined. As well, decidedly lacking from the site were the typically large storage pits which so characterize other Younge phase sites in southwestern Ontario. Only a few large, circular pits were discovered, and none of these were any deeper than 50 cm. The remaining pits found were small and shallow, with little in the way of artifact debris. In addition, three pits were filled with carbonized plant material, mostly outer bark and twigs, and are assumed to have been smudge pits, used in smoking hides. Almost as common as pits, a total of 8 hearths were found. These were mostly concentrated together in the central portion of excavated site and, as will be discussed later, appear to be associated with a particular function. Corresponding to this concentration of pits, hearths and post moulds was a layer of greasy black soil, encountered during excavations, lying at the subsoil-topsoil interface (Figure 5). While the thickness of this layer varied, it was consistently filled with large quantities of artifact debris, bone fragments, and occasionally had pockets of ash mixed in. A second stain area was also mapped, located to the west. These stains appear to be a sort of sheet midden deposit, defining what appears to be the central area of use for the site. As discussed below, artifact frequencies also conform to this central area.

Artifacts

Ceramics recovered appear to represent an early Younge phase occupation. In fact, ceramics from the site area suggest a possible transitional period from the Riviere au Vase phase to the Younge phase (Figures 6-9). Alternatively, the variability of

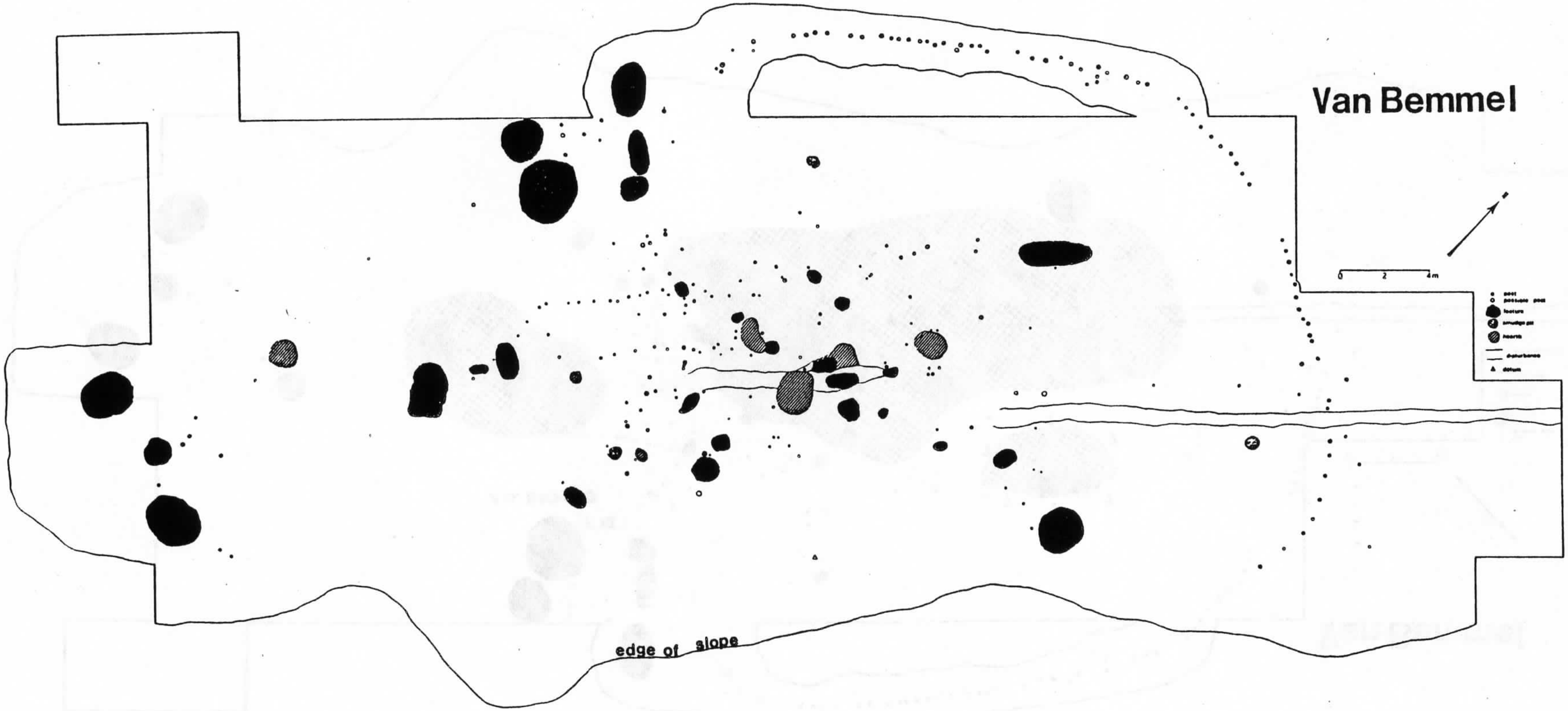

Figure 4: The Van Bemmel (AcHm-31) Settlement Pattern Map.

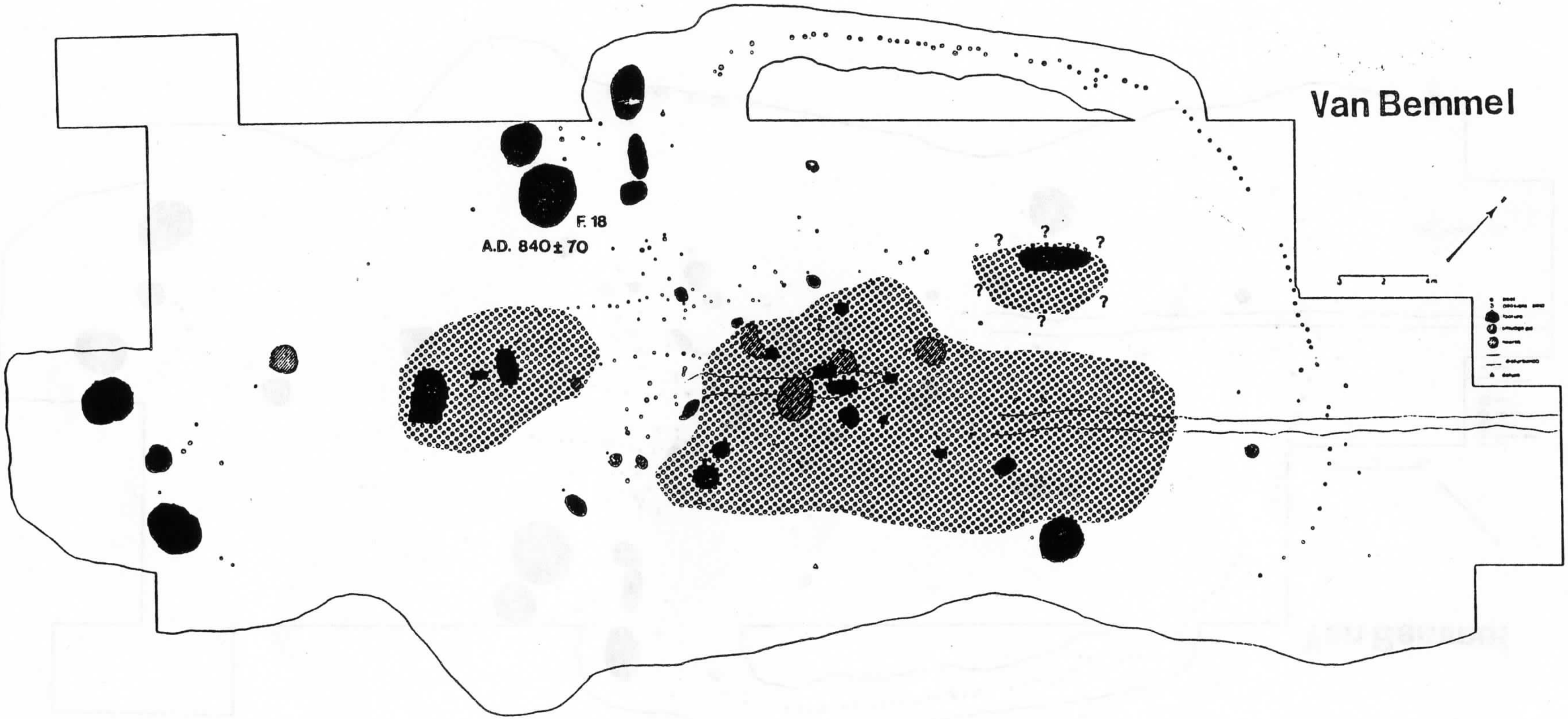

Figure 5: Extent of Refuse Stains Across the Van Bemmel Site.

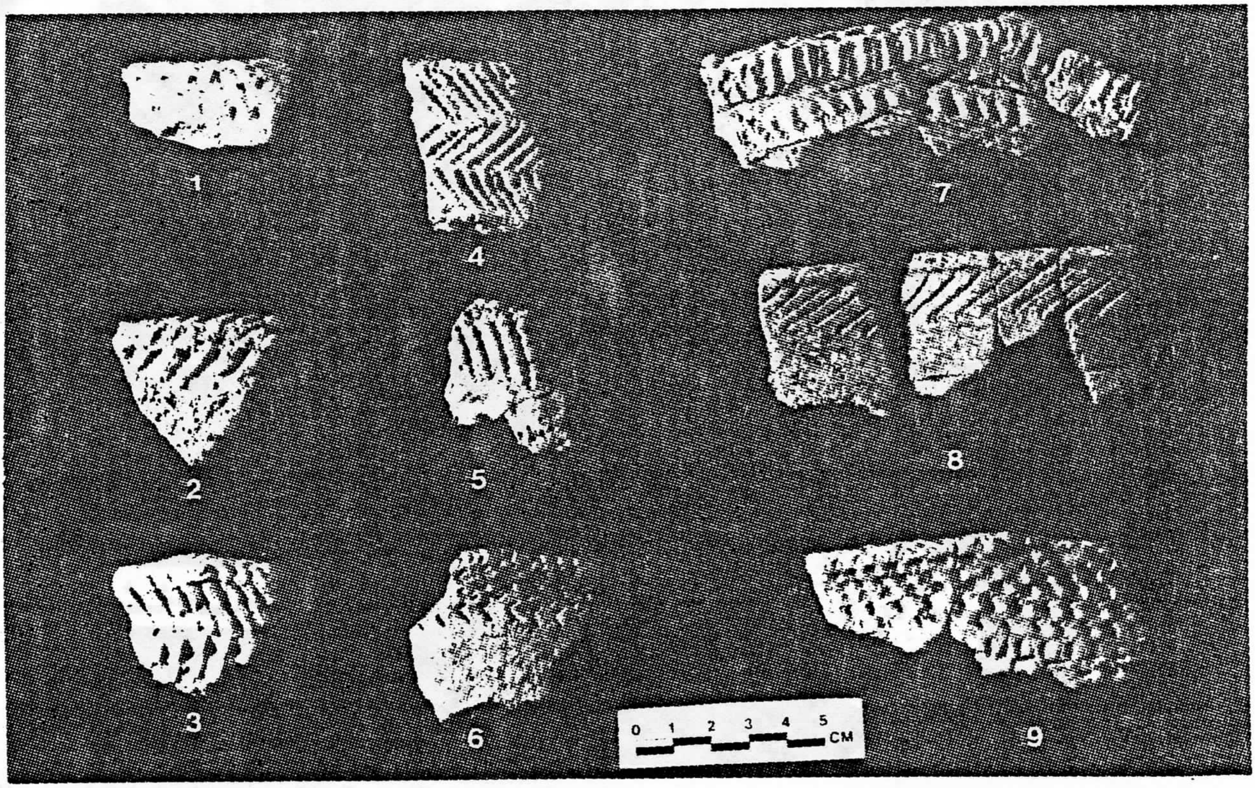

Figure 6: Younge Phase Rim Sherds From the Van Bemmel Site.

ceramics found at Van Bemmel may reflect continued but irregular use of the site over an extended period of time, which encompasses the 800-900 A.D. transitional period for the two phases. To date, only one acceptable radio-carbon date has been obtained for the site, from Feature 18 (Figure 5). The date of 1110 ± 70 B.P. BGS1265 (840 A.D. uncalibrated) from this feature appears to support the notion that Van Bemmel represents a very early Younge phase or transitional Riviere au Vase to Younge phase site. However, further dates are required in order to provide a more accurate range from the site. It is worth noting, however, that one rim section recovered in fragments from the surface of the site by John Sloan after first ploughing, with no other sherds found during excavations, appears to be definitely associated with an earlier, Riviere au Vase occupation (Figure 8), reinforcing the notion that the site was repeatedly occupied through the end of the Riviere au Vase and beginning of the Younge phase transition.

The ceramics from Van Bemmel held no surprises. Vessel fragments typical of the early Younge phase were recovered, characterized by the relatively elaborate decorative motifs common for the period. No reconstructable vessels were found, but rim sections do conform to the general vessel form typical of the Younge phase. Vessel lips were generally either castellated or scalloped, and decorated similar to the dominant technique used on the exterior of the vessel (Figures 6,7). Rim profiles tend to be outflared and necks are moderately to greatly extended, while shoulders are indistinct. Almost all vessel body sherds were cord marked, typical for this period. A few rim fragments exhibited an applique strip of clay applied to the top of the vessel in order to form the rim (Figure 9.a). This technique becomes increasingly common during the Younge phase. Decoration was applied primarily through tool impressions on rim sections, while incising was the dominant technique used on neck sections. Interior decoration simply replicated the dominant exterior technique used on the vessel and ranged from one or two rows to several rows of application. While analysis is far from complete, there appears to be a modest 20 to 25 vessels represented in the collection.

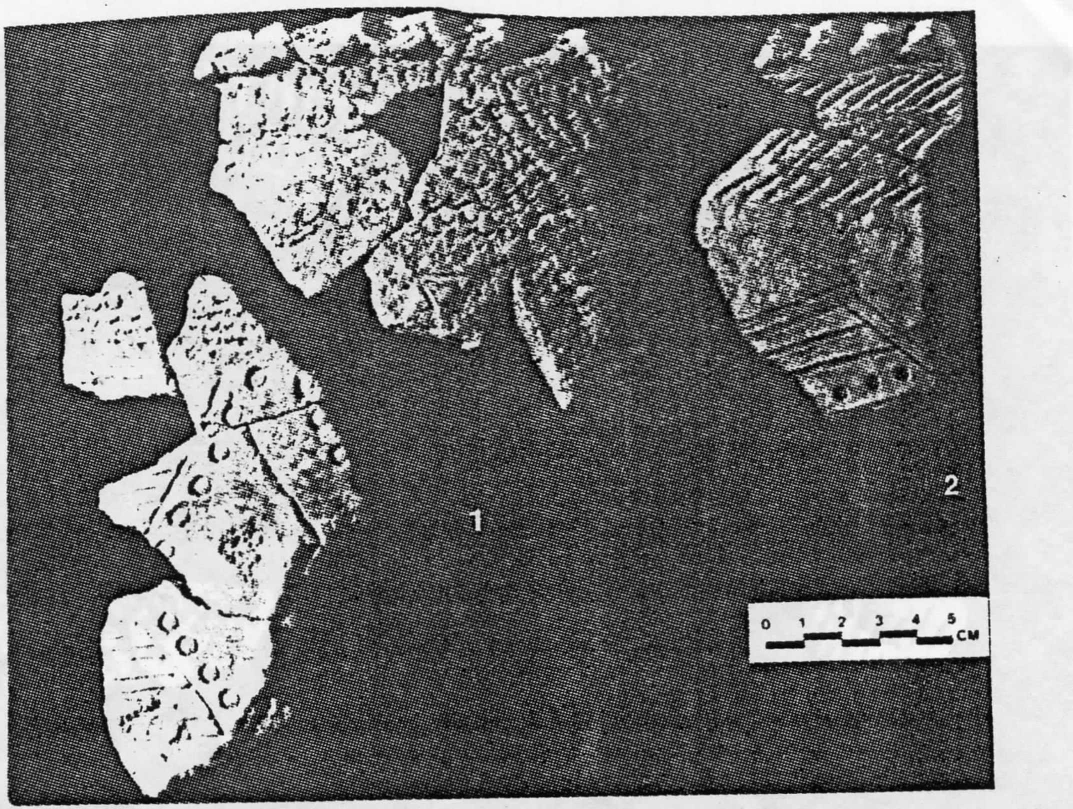

Figure 7: Two Vessel Sections From the Van Bemmel Site. Both vessels exhibit scalloped lips. The rim of Vessel 1 is marked by rows of stafford stamp, while the neck is marked by a diamond motif, with alternating open diamonds with punctates, and diamonds filled with horizontal incising. The rim of Vessel 2 is decorated with three rows of oblique tool impressions, followed on the neck by "flattened" diamonds with oblique incising and punctates.

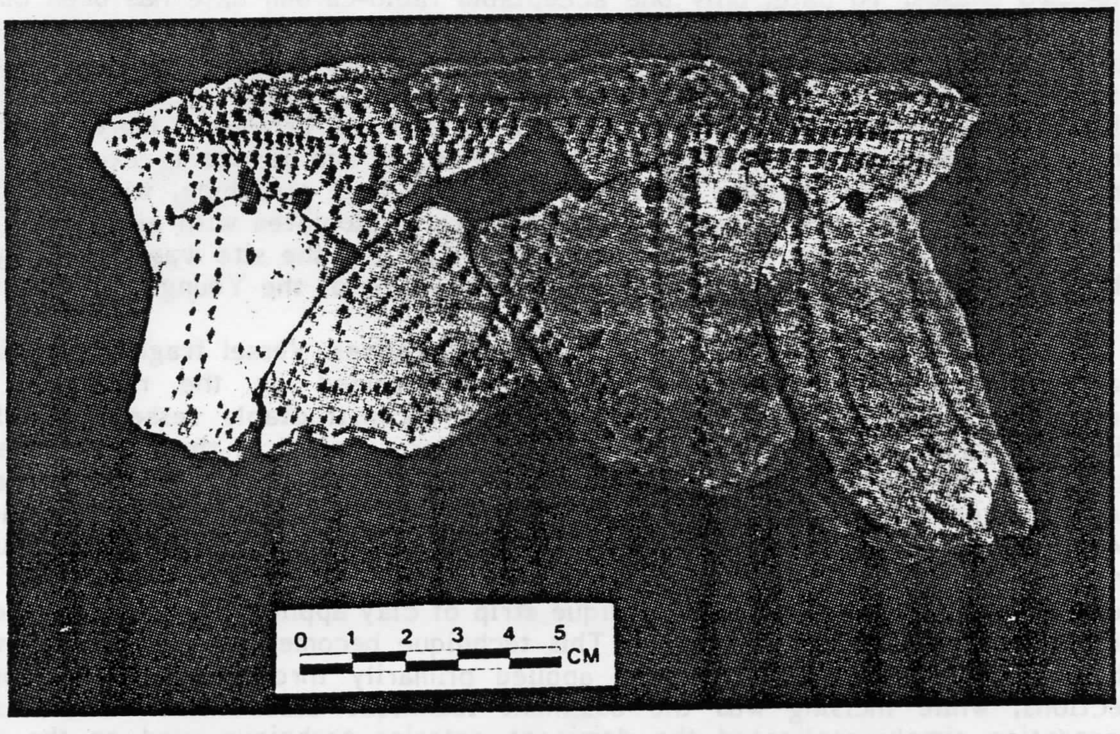

Figure 8: Likely Riviere au Vase Phase Rim Section Recovered From the Surface of the Van Bemmel Site. Exterior, lip and interior rim is decorated by rows of short cord-wrapped tool stamps, with the lip encircled by this tool. Below the rim is a single row of punctates with internal bosses. The neck is decorated by "L"-shaped

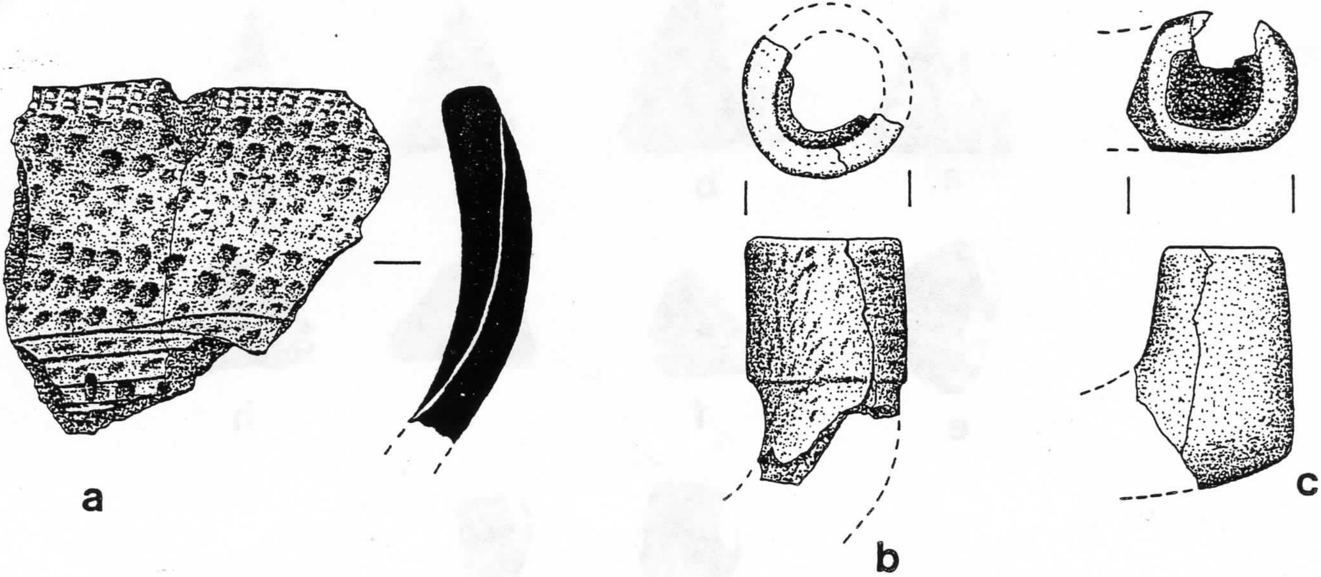

Figure 9: Rim and Pipe Bowls From the Van Bemmel Site. a: this rim was formed by the potter applying a strip of clay to the top of the vessel in order to form the lip and front of the rim. b: collared, slightly roughened pipe bowl. c: smoothed, "elbow" pipe.

Also recovered from the site were a few ceramic pipe fragments. Portions of two pipe bows were found (Figure 9.b and 9.c), common for the period. In addition, numerous stem fragments were recovered, all exhibiting a "D-shaped" cross section and smoothed exterior.

While the ceramic assemblage generally proved to be unremarkable, the lithic assemblage, normally a very unimpressive part of Western Basin material culture, proved to be extremely interesting at Van Bemmel. While only limited analysis could be conducted due to the addmixing of earlier Archaic and Woodland occupations on the site, the Younge phase associated assemblage still remains impressive. 14 projectile points or point fragments were recovered which can be attributed to the Younge phase occupation (Figure 10.a-d). All of these are typically triangular, Levanna-like points, made primarily on either Kettle Point, Onondaga or Selkirk chert, most likely obtained from locally available secondary deposits. The number of points from Van Bemmel is more than twice as large as would be expected. For example, the Bruner-Colisanti site in south Essex County, where over 200 features were excavated in just under a hectare area, yielded only 5 points (Lennox 1982: 14). It is worth stressing that prior to Van Bemmel, 5 points obtained from a Western Basin Late Woodland site in southwestern Ontario was considered high.

Of an even greater contrast is the astounding abundance of scrapers from Van Bemmel. 57 scrapers were recovered, and while some are likely associated with other occupations at the site, 37 end scrapers, all similar in form, were found within the hearth-pit area in the center of the excavation (Figure 11). In one 4 x 4 meter area for instance, 21 of these scrapers were recovered. The dominant form at Van Bemmel are end scrapers made from large, primary flakes. Most of the examples have steep ends, and exhibit heavy use. Close to half of the specimens appear to have been narrowed in order to provide a shaft or "handle". Several broken specimens suggest that this shaft had snapped off, presumably during use. On several specimens a slight spur appears at one corner of the scraper face (eg. Figure 11.b, d, g), although this may have been an

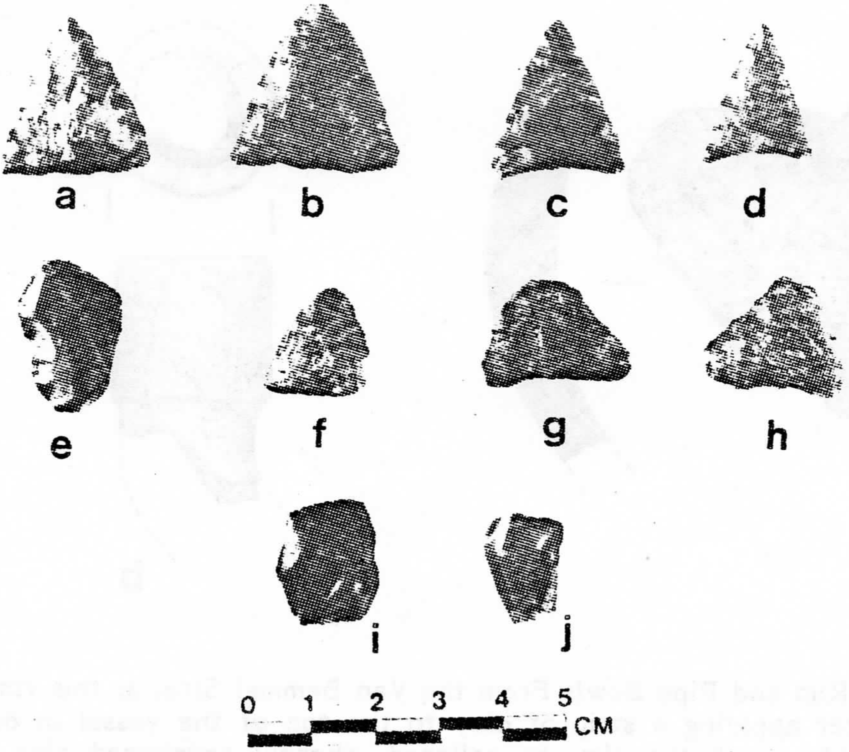

Figure 10: Lithic Tools From Van Bemmel. a-d: Levanna-like triangular projectile points; e-h: strike-a-lights; i-j: bipolar cores.

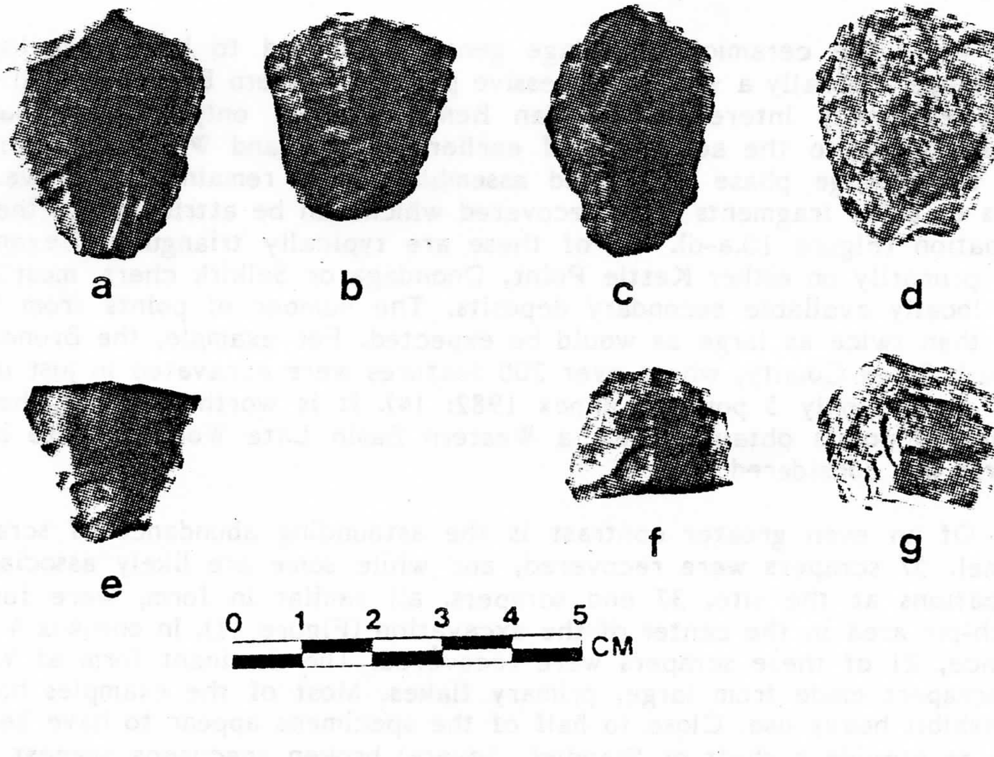

Figure 11: Endscrapers and Fragments From the Van Bemmel Site.

unintentional creation caused by resharpening. Compared to Van Bemmel, scraper yields have been dismal at other Western Basin sites in southwestern Ontario. For those excavations where reports are available, a total of less than a dozen scrapers were recovered, and the average scraper yield per site is just under 2 (eg. Kenyon 1988; Kenyon, Ferris and Hagerty 1988; Lennox 1982; Reid 1981; 1982; 1983). As discussed later, this distinction is believed to be due to the particular functions occurring at Van Bemmel.

Other lithic forms recovered and associated with the central activity area at the site include 17 point tips, 11 strike-a-lights (Figure 10.e-h) and a modest 5 drill fragments. The frequency particularly of strike-a-lights is again a radical departure from the normal pattern observed at Younge phase sites. Cores from the site are primarily bi-polar (Figure 10.i-j), and reflect the common use of secondary chert sources. Over 100 utilized flakes have been recovered from Van Bemmel, but association with a particular component is difficult. Likewise, debitage can not be associated with any one of the site components. Generally, debitage reflects a high percentage of local Onondaga and Selkirk material, followed closely by a respectable amount of Kettle Point chert. Exotic cherts such as Upper Mercer, Pipe Creek, Indiana Hornstone, Haldimand and even Flint Ridge were all recovered (Upper Mercer is represented by a significant 3-6% across the excavated area), however it is assumed that the majority of this exotic material was deposited by pre-Younge phase occupants.

Rough and ground stone artifacts are not abundant from the site. Several hammerstones have been recovered, some of which exhibit "nutting stone" depressions along their width, which traditionally have been interpreted as striking platforms for breaking open nut shells. Alternatively, these could have functioned as platforms for bi-polar flaking. No manos or matates were recovered, while fragments of four adzes were found. Finally, a slate tool, looking in form like an inverted ulu with a drill hole through the center of the piece, was found wedged into the side of a post mould. Presumably a wood-working tool, a similar, less-finished specimen was recovered from the Glen Meyer Calvert site near London Ontario (Prevec 1984: Figure 3.1).

The only bone tool recovered at Van Bemmel was a fragment of a bone needle. The faunal remains from the site (mostly obtained from topsoil screening and from the black refuse stain) reflect a rather distinctive pattern (Prevec 1988). Of close to 3800 fragments identified to order, over 99% represented mammal. The vast majority of mammal identified to species consisted of deer (80%), and raccoon (12%), with muskrat, river otter, chipmunk and grey squirrel rounding out the identifications. Only 2 bird bones and 1 fish bone were identified in the entire collection. These remains suggest that the hunting of deer was a primary activity done from the site. That much of the faunal collection was pulverized and calcined implies that activities were centered on the processing of kills. Finally, while far from complete, analysis of floral remains from the site has identified a few fragments of carbonized walnut shell. No cultigens have yet been found.

Artifact Frequency Patterns

Due to a lack of settlement and feature data from the site, it was necessary to plot a series of artifact class density maps for the site based on recovery yields from each 2 meter excavation unit. Figure 12 provides a series of schematic maps of the Van Bemmel site main excavation area, with Figure 12.a serving as a reference in order to allow the reader to orient the actual map of the site (Figures 4 and 5) with the schematic representations in Figure 12. When these artifact class densisty maps are plotted for each excavation unit, the notion of a central activity area on the site is

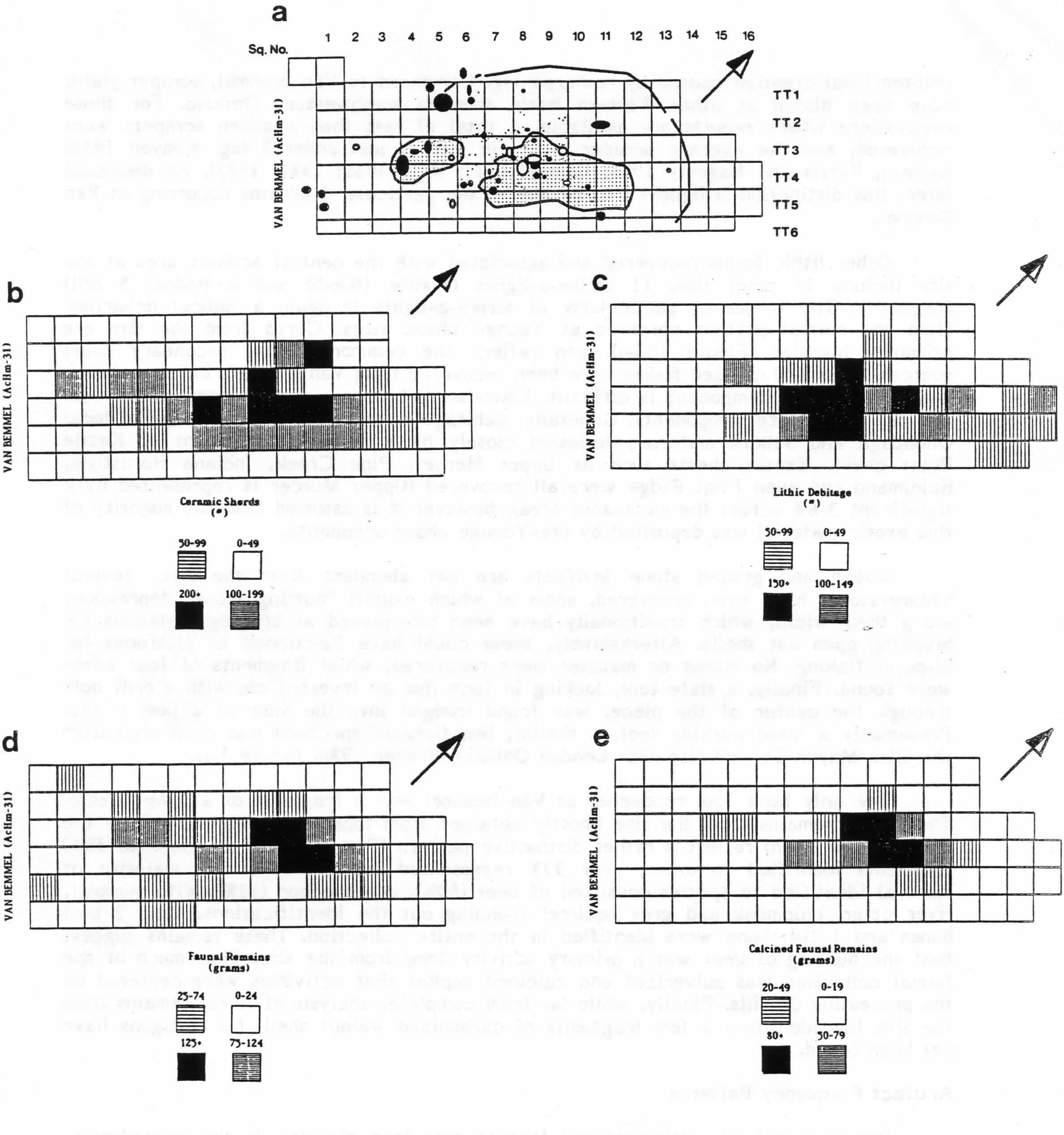

Figure 12: Artifact Class Density Maps For the Van Bemmel Site. Numbers of a specific artifact class are mapped across the site in 2-meter excavation units. For orientation of the site map (Figures 4 and 5) and these density maps, refer to 12.a. b: ceramic sherds; c: lithic debitage; d: faunal remains (by weight); e: calcined faunal remains (by weight).

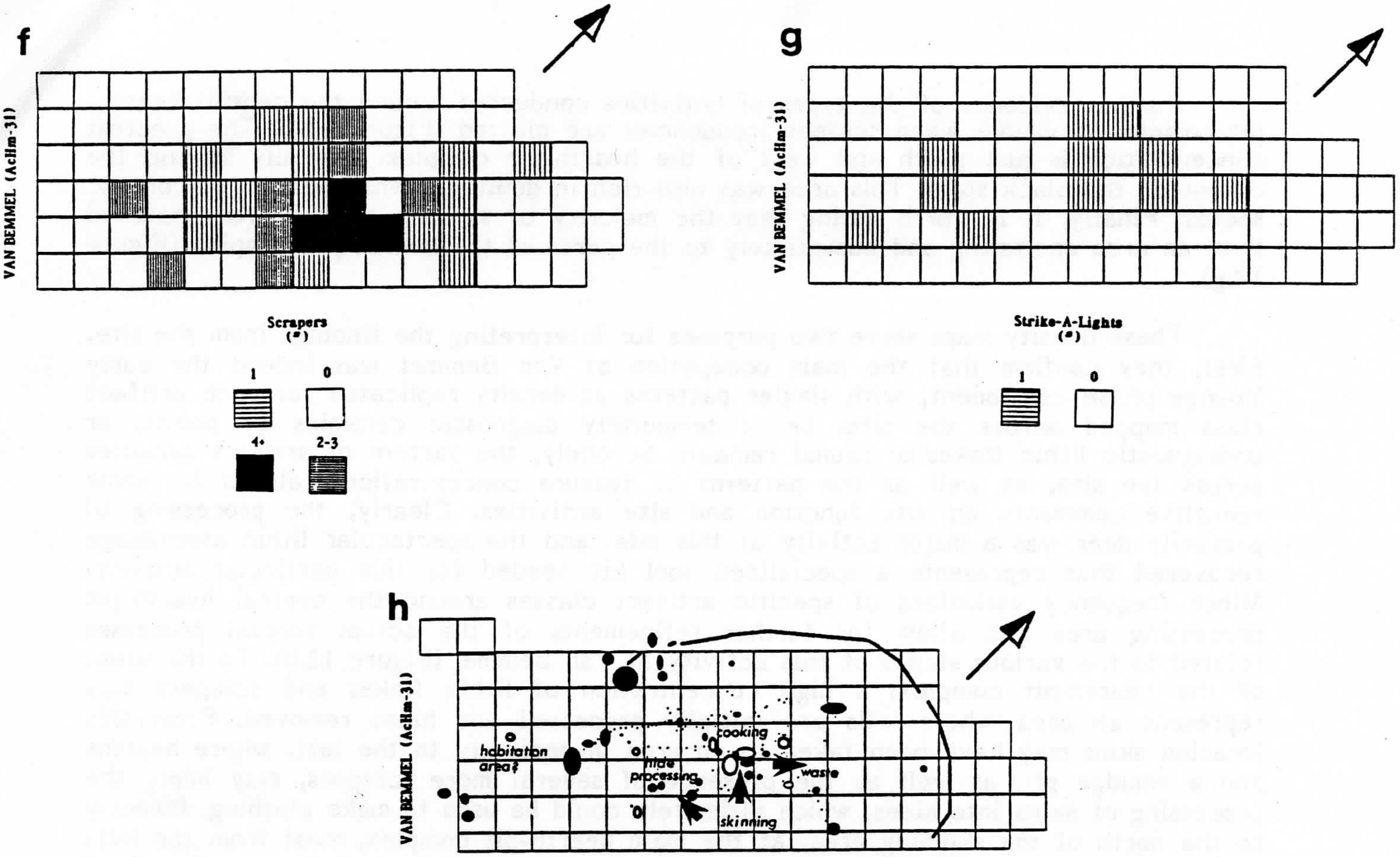

Figure 12: Artifact Class Density Maps for the Van Bemmel Site, Continued. f: scrapers; g: strike-a-lights; h: spatially defined activity areas across the site.

confirmed. Ceramic remains (Figure 12.b) correspond closely with the central cluster of hearths and features, with the greatest concentration located around this pit complex, and within the central black stain. A less dense, western concentration of ceramic sherds is also seen in the area around the second stain. When lithic debitage is plotted (Figure 12.c) a similar greatest density is seen around the central feature complex. A lesser concentration of lithic debitage towards the eastern end of the excavation is likely associated with a non-Younge phase lithic scatter noted on the surface of the ridge further to the east (Area G in Figure 2). Curiously, no western concentration of flakes is visible, unlike the pattern seen for ceramic sherds. Perhaps the central concentration of features, stain and artifacts is perhaps associated with a specific function or activity which occurred at the site, while the western stain, features and ceramic concentration is associated with a different function.

Indeed, distinctions between a central and western area of the site are reinforced when faunal densities are plotted. The general pattern closely corresponds to that seen for ceramic densities (Figure 12.d). However, when only calcined bone is plotted a tighter pattern is visible, centered around the hearth-pit complex and main refuse stain (Figure 12.e). Perhaps in this area the processing of kills was a primary activity, and the high concentration of calcined bone associated with this area may be a by-product of that activity. Curiously, the greatest concentration of bone is actually just east of the hearth-pit complex, but still within the extent of the main stain, which may suggest that refuse was tossed to this one side of the activity area.

Further evidence of the types of activities conducted around the central hearth-pit complex is visible when scraper frequencies are plotted (Figure 12.f). The greatest concentration is just south and west of the hearth-pit complex, partially beyond the extent of the black stain. This area was also rich in debitage, while less so of ceramic sherds. Finally, it is worth noting that the majority of strike-a-lights were recovered from an area encircling and immediately to the north of the hearth-pit complex (Figure 12.g).

These density maps serve two purposes for interpreting the findings from the site. First, they confirm that the main occupation at Van Bemmel was indeed the early Younge phase component, with similar patterns of density replicated for each artifact class mapped across the site, be it temporally diagnostic ceramics or points, or undiagnostic lithic flakes or faunal remains. Secondly, the pattern of artifact densities across the site, as well as the patterns of feature concentrations, allows for some tentative comments on site function and site activities. Clearly, the processing of primarily deer was a major activity at this site, and the spectacular lithic assemblage recovered thus represents a specialized tool kit needed for this particular activity. Minor frequency variations of specific artifact classes around the central hearth-pit processing area can allow for further refinements of the actual spacial processes related to the various stages of this activity at Van Bemmel (Figure 12.h). To the south of the hearth-pit complex, a high concentration of lithic flakes and scrapers may represent an area where kills are initially processed and hides removed. From this location skins may have been taken to an area immediately to the left, where hearths and a smudge pit, as well as the presence of several more scrapers, may imply the processing of skins into hides, which ultimately could be used to make clothing. Directly to the north of the skinning area, at the main hearth-pit complex, meat from the kills was likely cooked, while bone and other animal parts could be boiled into other food products. Finally, after the processing of meat, the refuse was tossed to the east, away from the activity area and into a thin sheet midden. Separate from this central activity area and to the west, artifact densities of ceramics and bone, and a lack of lithic debitage and formal lithic tools more abundant in the central activity area suggests that, despite a lack of features, the west end of the site was used by the Younge phase occupants of Van Bemmel. Perhaps this portion of the site served as a habitation area (thus explaining the variance from the pattern observed around the central hearth-pit complex), although specific uses and extent cannot be firmly determined.

Discussion

It is perhaps redundant by this point to say that, based on the data recovered, the Van Bemmel Younge phase occupation was most probably a late fall hunting-processing camp. It is likely that this site was occupied by a small number of individuals, perhaps one or two families, for a short period of time in the fall, perhaps after moving inland from warm weather settlements on the Thames River. From the Van Bemmel camp short-term hunts were staged, focused on deer populations during the late fall rutting season. Likely one or the other of several nearby black ash swamps served as a place to find large numbers of deer. Kills were brought back to the camp, where they were rendered into foodstuffs and clothing, likely in preparation for the upcoming winter. The lack of large storage pits, so typical on other Younge phase sites, no doubt reflects the short period of actual occupation at the site during the hunting season, and the fact that the locale would not be returned to or passed by until the following year, or perhaps even longer. Finally, while length of occupation at the site was brief, the intensity of the subsistence related activities was great. This can be seen in the frequency of lithic tools present, as well as the black soil stain, which likely reflects the byproduct of skinning, gutting and processing a large number of animals in that locale. Finally, once activities had finished at the Van Bemmel site, these Younge phase peoples likely moved north, between McGregor's Creek and the Thames River, to an area marked by a series of sandy ridges and further low swampy areas, which would have been ideal for locating a winter camp. Such a camp would almost assuredly look very much like the Sherman site, located to the north of the Thames River and east (Murphy 1989).

Special function sites, established for the purpose of a specific subsistence activity, have been documented for some time in the archaeology of the contemporaneous Glen Meyer Iroquois (eg. Williamson 1983). However, a similar hunting and processing camp to that documented at Van Bemmel has yet been identified for the Glen Meyer. The closest Ontario Iroquoian analogue to Van Bemmel is the Horner Creek historic Neutral camp site, located west of the Grand River in Brant County (Lennox 1987). This site was characterized by a high incidence of lithic remains, calcined and pulverized mammal remains, a series of hearths, and a lack of ceramics or settlement data. A lack of scrapers may imply that skins were not being processed at this site. Lennox believes that this site was occupied primarily by a male hunting group, perhaps returning from areas further to the west, were they had been hunting during the winter (1987: 20). The presence of ceramics at Van Bemmel (including some juvenile sherds) reflects a different group composition than at Horner Creek, and may be indicative of the different ethnic groups represented at these two camps, in that seasonal activities occurring during the Central Algonqiuan Western Basin Younge phase were conducted by a basic family group, while Iroquoian communities had established more of a division of labour, with hunting parties represented at Horner Creek apparently reflecting a male activity. Turning west, the only possibly similar Western Basin site to Van Bemmel is the Veitch site, in St. Clair County Michigan, which is generally dated to the Younge phase (Krakker 1984). At this small site a similar black, refuse filled stain was encountered, most of the faunal remains were burned, and hearths but few features were recorded. Lacking however are large quantities of scrapers and other lithic tools common on Van Bemmel.

To conclude, the Van Bemmel site represents an intensive harvest of a high-yield resource, and the processing of that resource into products which could be used during the upcoming winter period of less abundance. The site has proven to be an unique commodity for the understanding of Western Basin Late Woodland seasonal round activities and reinforces the importance of seasonal mobility in the archaeological record. The site's distinctive artifact assemblage and settlement patterns do not replicate themselves at other Western Basin sites. As well, the cold weather subsistence pattern at Van Bemmel, based on faunal remains recovered, varies greatly from other Western Basin sites with comparable faunal collections. Figure 13 provides a simple ratio of mammal and fish bone percentages from Van Bemmel and other Western Basin sites in southwestern Ontario. Clearly, ratio of fish to mammal remains varies between sites, apparently due to season and/or function. The Robson Road site, for instance, located by Lake Erie, was primarily a spring-summer fish extraction locale, while Dymock and Macklin represent warm weather occupations adjacent to major water sources. Cherry Lane and Bruner-Colasanti are fall locales, while the Sherman site is an interior winter camp. This bar graph does not reveal anything startling, other than showing that fish procuring locales are abundant with fish remains, while more diffuse focus warm weather occupations tend to be represented by a majority of mammal but a good percentage of fish as well, while cold weather interior hunting camps, removed spacially and seasonally from good fishing locales, have an almost complete lack of fish remains. Nonetheless, this graph does confirm the seasonal mobility of Western Basin peoples and points out the obvious limitations to documenting settlement-subsistence remains from a single site, or several sites all representing a similar seasonal period of occupation, when is dealing with a cultural group such as the Western Basin peoples of

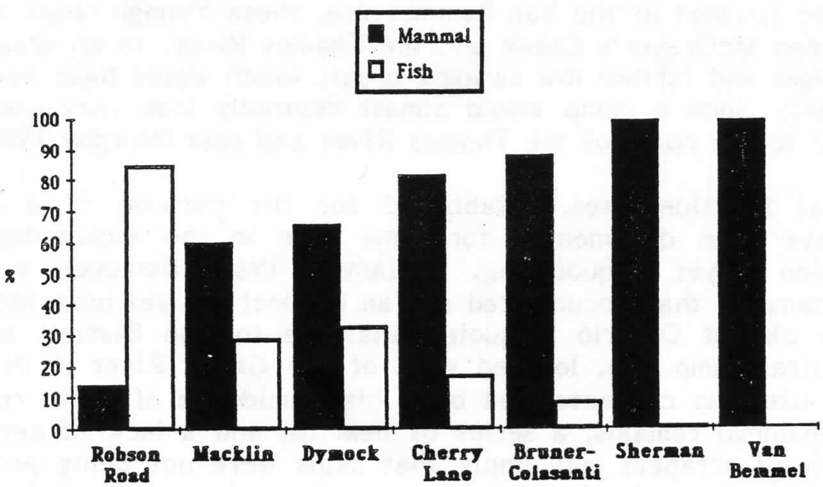

Figure 13: A Comparison of Mammal and Fish Remains From Several Western Basin Late Woodland Sites in Southwestern Ontario. Information obtained from Lennox (1982) and from site faunal reports done by Rosemary Prevec.

southwestern Ontario, who maintained a mobile seasonal round. This also illustrates the importance that small, short term sites like Van Bemmel can be in reconstructing past lifeways for the Western Basin Tradition. While excavating a site with 1, 2, or 3 hundred storage pits, upwards of a meter deep and many with no diagnostic material may be an invigorating attempt to destroy one's back, the actual information recovered from such sites are necessarily limited to the fairly obvious (eg. Kenyon, Ferris and Hagerty 1988 for one example). Van Bemmel, as well as the even more critical Sherman site, provide much more interpretable data, not to mention at a greatly reduced expense to one's back!

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